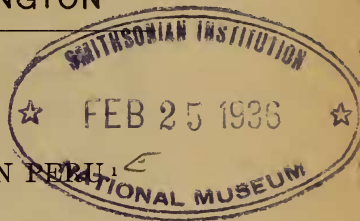


0673

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



SOME SNAKES FROM NORTHWESTERN PERU.
BY EMMETT REID DUNN.

The snakes which form the subject of this paper were collected by Mr. G. K. Noble while a member of the Harvard School of Tropical Medicine expedition to Northwestern Peru in 1916. I am indebted to Dr. Thomas Barbour for the opportunity of reporting upon this material, which is preserved in the Museum of Comparative Zoology.

The localities concerned are: Chongollapi, at the edge of the coastal desert in the province of Piura; Huancabamba, on the western range of the Andes, at the border of Piura and Cajamarca; Tabacónas, a little valley between the ranges of the cordillera in the northern part of Cajamarca and in the only strip of rain forest met with during the expedition; Perico and Bellavista in the low, broad and arid valleys of the Chinchipe and Marañon rivers. The specimens labeled Chongollapi were purchased from a Chinese restaurant keeper and may have come from further inland. Most of the material came from Perico and from Bellavista.

The collection contains 17 species. Most of these need no discussion, but there are two extremely interesting rediscoveries, and one apparently undescribed species.

Perhaps the most important find is three specimens of a small snake of the family *Typhlopidae*. These correspond almost exactly with the description and figure of *Anomalepis mexicana* Jan (Icon. Gen., 1, pl. V, VI, f. 1, 1861). The type in the Milan Museum was said to have come from Mexico. These three specimens from Perico are apparently the only others ever recorded. Teeth are present on the maxilla and absent from the dentary, so that Jan's statement of its relationship to *Typhlops* was correct. Garman (Mem. Mus. Comp. Zool., VIII, 3, 1883) stated on page 2 that *Anomalepis* had teeth in the lower jaw and referred the genus to the

¹Contribution from the Department of Zoology, Smith College.

Stenostominae. On page 4 in the diagnosis of the genus he stated that the teeth were in the upper jaw. This mistake of Garman's was followed by Boulenger, who referred the genus to the *Glauconiidae* in his Catalogue of Snakes. Neither Garman nor Boulenger ever examined the animal, and Boulenger's action, aside from following Garman, was occasioned by doubt whether Jan examined the dentition of the type, and by the fact that *Anomalepis* has enlarged preanal shields, thus differing from *Typhlops* and resembling *Leptotyphlops*. There is now no doubt about the correct assignment of this remarkably primitive genus to the *Typhlopidae*. Its nearest ally is *Helminthopsis*, although this is much closer to *Typhlops* than to *Anomalepis*. This snake has actually all the normal head shields of a Colubrid save for the fusion of the internasals with the prefrontals, and the breaking up of the parietals into small scales. There are three upper labials, a loreal, two preoculars, a supraocular, and three postoculars. The scale rows are 26 in two specimens and 24 in one. The type had 22 scale rows, a difference which does not seem very significant. The diameter is contained in the total length from 27 to 44 times. The lengths are 150, 155 and 175 mm.

The following species do not require detailed consideration:

- Leptotyphlops albifrons* (Wagler). Bellavista 6.
Constrictor constrictor (Linnaeus). Perico 1.
Spilotes pullatus dichrous (Peters). Chongollapi 1; Perico 1.
Drymobius boddaerti (Szenten). Chongollapi 1; Bellavista 1; Huancabamba 3.
Liophis taeniurus (Tschudi). Huancabamba 1.
Clelia cloelia (Daudin). Perico 3.
Clelia bitorquata (Günther). Perico 2; Bellavista 7.
Leptodeira annulata (Linnaeus). Perico 5; Bellavista 12.
Tantilla melanocephala (Linnaeus). Perico 1.
Oxybelis acuminatus (Wied). Bellavista 3.
Micrurus corallinus (Wied). Perico 5; Bellavista 1.
Bothrops atrox (Linnaeus). Perico 1.

Clelia fitzingeri (Tschudi) is a rare species, and it is unfortunate that the one specimen (which lacks the loreal plate) should have come from Chongollapi and hence be of none too certain provenance.

The three remaining forms belong to the so-called family *Amblycephalidae*. I am in accord with Cope regarding the American genera placed by Boulenger in this group, and I believe that they are allied to *Tropidodipsas* and *Petalognathus* rather than to the Asiatic genera with which Boulenger associates them.

One of these species is a *Sibynomorphus* which was taken in the rain forest at Tabacónas. It has much in common with four species described from Peru. These are: *Leptognathus peruana* Boettger (Cat. Rept. Mus. Senckenbergianum, 2, p. 128, 1898), from Cuzco; *Leptognathus boettgeri* Werner (Abh. Mus. Dresden, 9, 2, p. 11, 1901), from Chanchomayo; *Leptognathus schunkii* Boulenger (Ann. Mag. Nat. Hist., 1, p. 115, 1908) from Chanchomayo; and *Leptognathus latifasciatus* Boulenger (Ann. Mag.

Nat. Hist., 8, 12, p. 72, 1913), from the upper Marañón. I give comparisons of the scale counts of these with the present specimen.

	Ventrals	Caudals	Labials	Labials entering eye	Oculars
Present specimen.....	182	90	9	4, 5, 6	1-2
Latifasciatus.....	191	106	9	4, 5, 6	1-2
Boettgeri.....	195	90	9	4, 5, 6, 7	1-2
Schunkii.....	177-188	90-102	8-9	3, 4, 5 or 4, 5, 6	1-2, 3
Peruana.....	180	79	8	3, 4, 5	0-2

Peruana and *latifasciatus* agree well in described color with the Tabacónas animal, while *boettgeri* and *schunkii* differ. The closest anatomical agreement is then with *latifasciatus*, and as this is from the nearest locality of the four I call the Tabacónas specimen *Sibynomorphus latifasciatus*, although I am rather sceptical regarding the validity of all four of these forms.

The next two species belong to the genus *Pseudopareas*, which is allied to *Sibynomorphus* but has a cylindrical body, a more normal head shape, smaller eyes, and less enlarged vertebral scale row. Thus it approaches *Tropidodipsas* but may be told from it by the peculiar chin plates which are as in *Sibynomorphus*.

Eight specimens from Huancabamba apparently represent the type of the genus. This was described by Jan (Icon. Gen., 37, pl. VI, f. e. 1870) as *Leptognathus vagus*, from a specimen in the Milan Museum said to come from Hong Kong. The ventrals of the present series range from 146-157; caudals, male 62-66, female 53-57; oculars 1-2 (one specimen has two preoculars); upper labials 7-8 (seven in two specimens); 4th and 5th labials entering eye (one specimen with seven labials has 3d and 4th entering eye); temporals 1-2 in five, 2-3 in one and 1, 2-2 in two. The belly is spotted but the under side of the tail is immaculate. The three females have much less ventral spotting than the five males. Jan's figure of the type shows 51 subcaudals, spotting on the under side of the tail, and spotting on the belly much heavier than any of our females. The type, judging by the number of caudals, was a female. I am not inclined to stress these differences. The largest is 412 mm. long, tail 100 mm.

Twenty-seven specimens from Bellavista represent a species closely allied to the preceding but quite distinct. It may be called *Pseudopareas vagrans*. It differs in color, in longer tail with more subcaudals, in usually having temporals 2-3, in a tendency to have two preoculars, and in a tendency to have more than 8 labials. It is a larger snake, the type being 560 mm. in total length, tail 133.

The type, a female, M. C. Z. No. 17284, may be described as follows: eye moderate, diameter about equal to distance to lip, less than distance

to nostril; rostral broader than deep, well visible from above; internasals about one-third as long as prefrontals; frontal longer than broad, shorter than distance from tip of snout, shorter than parietals; loreal as long as deep; two preoculars; two postoculars; temporals 1-2; upper labials 8 on one side, fourth and fifth entering eye, 10 on the other side, fourth, fifth, and sixth entering eye; one pair of lower labials in contact behind mental; three pairs of squarish chin shields, the first pair longer than broad; fifteen scale rows, vertebral barely enlarged; 156 ventrals, anal single; 74 subcaudals; pale brown, anteriorly with five darker crossbands which become broken posteriorly into three rows of indistinct spots; symmetrical brown markings on head; belly yellow, with squarish brown spots on the ends of most of the ventrals.

The upper labials are 8 in 1 case, 8-9 in two cases, 9 in two, 9-10 in one, and 8-10 in one. The temporals of the first row are 1 in two cases, 1-2 in three cases, 2 in eighteen, 2-3 in one, and 3 in two. The second row of temporals are 2 in six cases, 2-3 in four, and 3 in seventeen. The preoculars are 1 in fourteen cases, 1-2 in four, and 2 in nine. The postoculars are 1-2 in one case, 2 in twenty-five, and 3 in one. Another female has ventrals 160, caudals 76. Two males have caudals 82 and 89. The ventrals range in number from 142-165. One specimen has a divided anal. The subcaudals vary from 73-89.

The hemipenis of *Pseudopareas*, as determined on *P. vagus*, is undivided, the sulcus is forked. The proximal portion has small hooks, the distal portion is covered with calyces. There seems to be an ill-defined edge to the calyculate portion, so that the hemipenis is somewhat "capitate."

The maxillary dentition is about 12 equal teeth.

The species of *Pseudopareas* seem to be four. They are, in addition to the two just discussed, *Leptognathus atypicus* Cope (Proc. Acad. Philadelphia, 1874, p. 65) from the Andes of Peru, and *Tropidodipsas spilogaster* Griffin (Mem. Carnegie Mus., 1915, p. 197) from Province Sara, Bolivia, 350 M. alt.

They may be distinguished as follows:

No preoculars

6 upper labials.....*Pseudopareas atypicus* (Cope).

7 upper labials.....*Pseudopareas spilogaster* (Griffin).

Preoculars present

Subcaudals 51-66.....*Pseudopareas vagus* (Jan).

Subcaudals 73-89.....*Pseudopareas vagrans* Dunn.